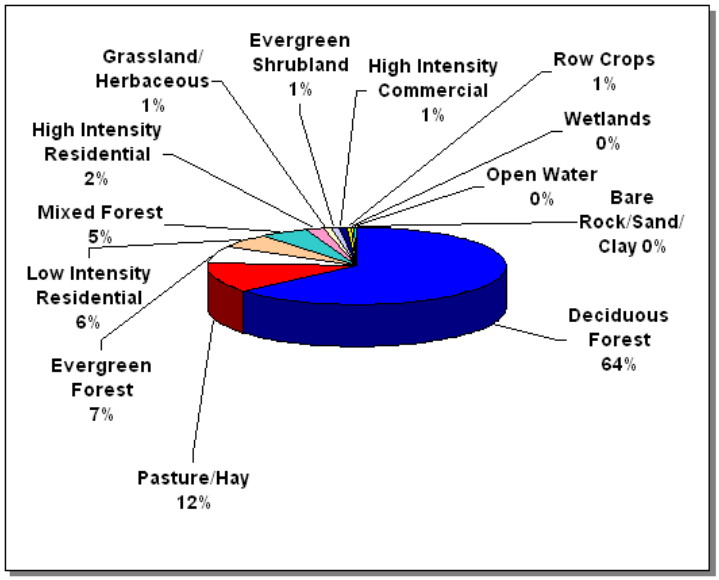
Summary – Pigeon River Watershed (06010106)

In 1996, the Tennessee Department of Environment and Conservation Division of Water Pollution Control adopted a watershed approach to water quality. This approach is based on the idea that many water quality problems, like the accumulation of point and nonpoint pollutants, are best addressed at the watershed level. Focusing on the whole watershed helps reach the best balance among efforts to control point sources of pollution and polluted runoff as well as protect drinking water sources and sensitive natural resources such as wetlands. Tennessee has chosen to use the USGS 8-digit Hydrologic Unit Code (HUC-8) as the organizing unit.

The Watershed Approach recognizes awareness that restoring and maintaining our waters requires crossing traditional barriers (point *vs.* nonpoint sources of pollution) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials, and technical personnel all have opportunities to participate. The Watershed Approach provides the framework for a watershed-based and community-based approach to address water quality problems.

Chapter 1 of the Pigeon River Watershed Water Quality Management Plan discusses the Watershed Approach and emphasizes that the Watershed Approach is not a regulatory program or an EPA mandate; rather it is a decision-making process that reflects a common strategy for information collection and analysis as well as a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. Traditional activities like permitting, planning and monitoring are also coordinated in the Watershed Approach.

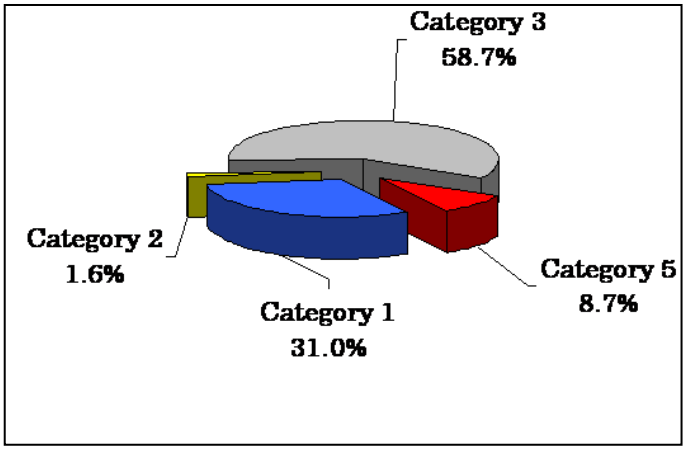
A detailed description of the watershed can be found in Chapter 2. The Pigeon River Watershed is approximately 704 square miles (153 mi^2 in Tennessee) and is located predominantly in one county (Cocke). A part of the Tennessee River drainage basin, the watershed has 310.8 stream miles.



Land Use Distribution in the Tennessee Portion of the Pigeon River Watershed.

Parts of one national park and one national forest are located in the watershed. Eighteen rare plant and animal species have been documented in the watershed, including two rare fish species.

A review of water quality sampling and assessment is presented in Chapter 3. Using the Watershed Approach to Water Quality, 136 sampling events occurred in the Pigeon River Watershed in 2000-2005. These were conducted at ambient, ecoregion or watershed monitoring sites. Monitoring results support the conclusion that 78.9% of stream miles assessed fully support one or more designated uses.



Water Quality Assessment of Streams and Rivers in the Tennessee Portion of the Pigeon River Watershed. Assessment data are based on the 2006 Water Quality Assessment of 310.8 stream miles in the Tennessee portion of the watershed.

Also in Chapter 3, a series of maps illustrates overall use support in the watershed, as well as use support for the individual uses of Fish and Aquatic Life Support, Recreation, Irrigation, and Livestock Watering and Wildlife. Additional maps illustrate streams that are listed for impairment by specific causes (E. coli, color).

Point and Nonpoint Sources are addressed in Chapter 4 which is organized by HUC-12 subwatersheds. Maps illustrating the locations of STORET monitoring sites and stream gauging stations are also presented in each subwatershed.

HUC-8	HUC-10	HUC-12
06010106	0601010601	06010106010106 (Pigeon River)
		06010106010107 (Pigeon River)
		06010106010108 (Pigeon River

The Tennessee Portion of the Pigeon River Watershed is Composed of three USGS-Delineated Subwatersheds (12-Digit Subwatersheds).

Point source contributions to the Pigeon River Watershed consist of 6 individual NPDES-permitted facilities. Other permits in the watershed (as of October 13, 2008) are Mining Permits (2), Aquatic Resource Alteration Permits (12), Tennessee Multi-Sector Permits (18), Construction General Permits (12), and Ready Mix Concrete Plant Permits (3). Agricultural operations include cattle, chicken, hog, and sheep farming. Maps illustrating the locations of permit sites and tables summarizing livestock practices are presented in each subwatershed.

Chapter 5 is entitled *Water Quality Partnerships in the Pigeon River Watershed* and highlights partnerships between agencies and between agencies and landowners that are essential to success. Programs of federal agencies (Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, Tennessee Valley Authority, National Park Service, and U.S. Forest Service), and state agencies (TDEC/State Revolving Fund, TDEC Division of Water Supply, Tennessee Department of Agriculture, and Tennessee Wildlife Resources Agency as well as North Carolina Division of Water Quality). Local initiatives of organizations active in the watershed (Smoky Mountain RC&D Council) are also described.

Point and Nonpoint source approaches to water quality problems in the Pigeon River Watershed are addressed in Chapter 6. Chapter 6 also includes comments received during public meetings, links to EPA-approved TMDLs in the watershed, and an assessment of needs for the watershed.

The full Pigeon River Watershed Water Quality Management Plan can be found at: http://www.state.tn.us/environment/wpc/watershed/wsmplans/